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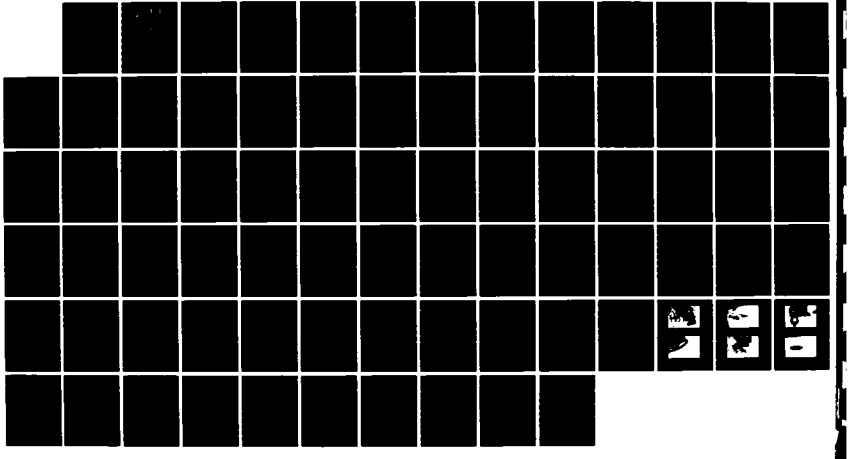

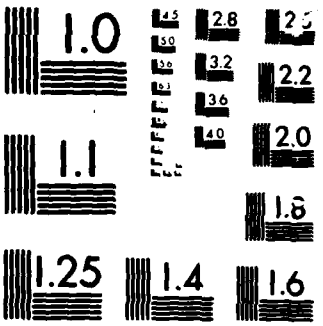

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PUBLIC WORKS CENTER GUAM FLEET MOORINGS UNDERWATER INSPECTION REPORT

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SEPTEMBER 1983

OCEAN ENGINEERING
AND CONSTRUCTION PROJECT OFFICE
CHESAPEAKE DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, D.C. 20374

FPO-1-83 (32)

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This report contains results of the inspection of 22 fleet moorings operated and maintained by the Public Works Center, Guam. A CHESNAVFACENGCOM-assigned Engineer-in-Charge and divers from Underwater Construction Team Two conducted the inspection from 6-14 June 1983. (Con't)

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Of the 22 moorings inspected, 19 were found to be in satisfactory condition, and 3 were found to be in fair condition with 1 of these recommended for overhaul. Specific comments concerning each of these moorings and recommendations for future actions are included in this report.

Abstract

This report contains results of the inspection of 22 fleet moorings operated and maintained by the Public Works Center, Guam. A CHESNAVFACENGCOM-assigned Engineer-in-Charge and divers from Underwater Construction Team Two conducted the inspection from 6-14 June 1983.

Of the 22 moorings inspected, 19 were found to be in satisfactory condition, and 3 were found to be in fair condition with 1 of these recommended for overhaul. Specific comments concerning each of these moorings and recommendations for future actions are included within this report.

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PWC GUAM FLEET MOORINGS INSPECTION REPORT

1.0 INTRODUCTION

1.1 **Background.** Under the COMNAVFACENGCOM Fleet Mooring Maintenance (FMM) Program, CHESNAVFACENGCOM has been assigned the responsibility to plan and conduct periodic diver inspections of all fleet moorings worldwide. In carrying out this responsibility, CHESNAVFACENGCOM designated an Engineer-in-Charge (EIC) to provide inspection planning and onsite technical direction for the underwater inspection of fleet moorings located in Apra Harbor near the Public Works Center Guam. The actual underwater portion of the inspection was performed by divers of Underwater Construction Team Two (UCT TWO). The inspection was conducted 6-14 June 1983.

1.2 **General Mooring History.** PWC Guam currently operates and maintains 22 fleet moorings. They consist of one AA-, one CC-, one A-, thirteen B-, five D-, and one E-class moorings. Figure 1 shows the overall geographic positions of these moorings located in Apra Harbor, Guam, while Figures 2 and 3 are enlargements of portions of Apra Harbor and show the positions of the fleet moorings located in the outer and inner harbors, respectively.

The latest maintenance data summary concerning these moorings was prepared by PWC Guam in April 1983. Table 1 is a copy of this summary.

2.0 INSPECTION PROCEDURES

2.1 **Inspection Objectives.** The purpose of the mooring inspections was to determine the general physical condition of the buoys and chain assemblies and, when possible, to verify or update existing as-built and maintenance records. Divers inspected only a portion of the submerged buoy hull and chain assemblies in order to compile a general description of the mooring's condition. The existence of fairly consistent measurements during this inspection provides a good indication of the mooring's overall condition. It should be kept in mind that periodic underwater inspections are intended as an expedient and relatively inexpensive supplement to accurate maintenance records. As such, they cannot fully substitute for a complete inspection involving recovery of the mooring and the measurement and evaluation of each component.

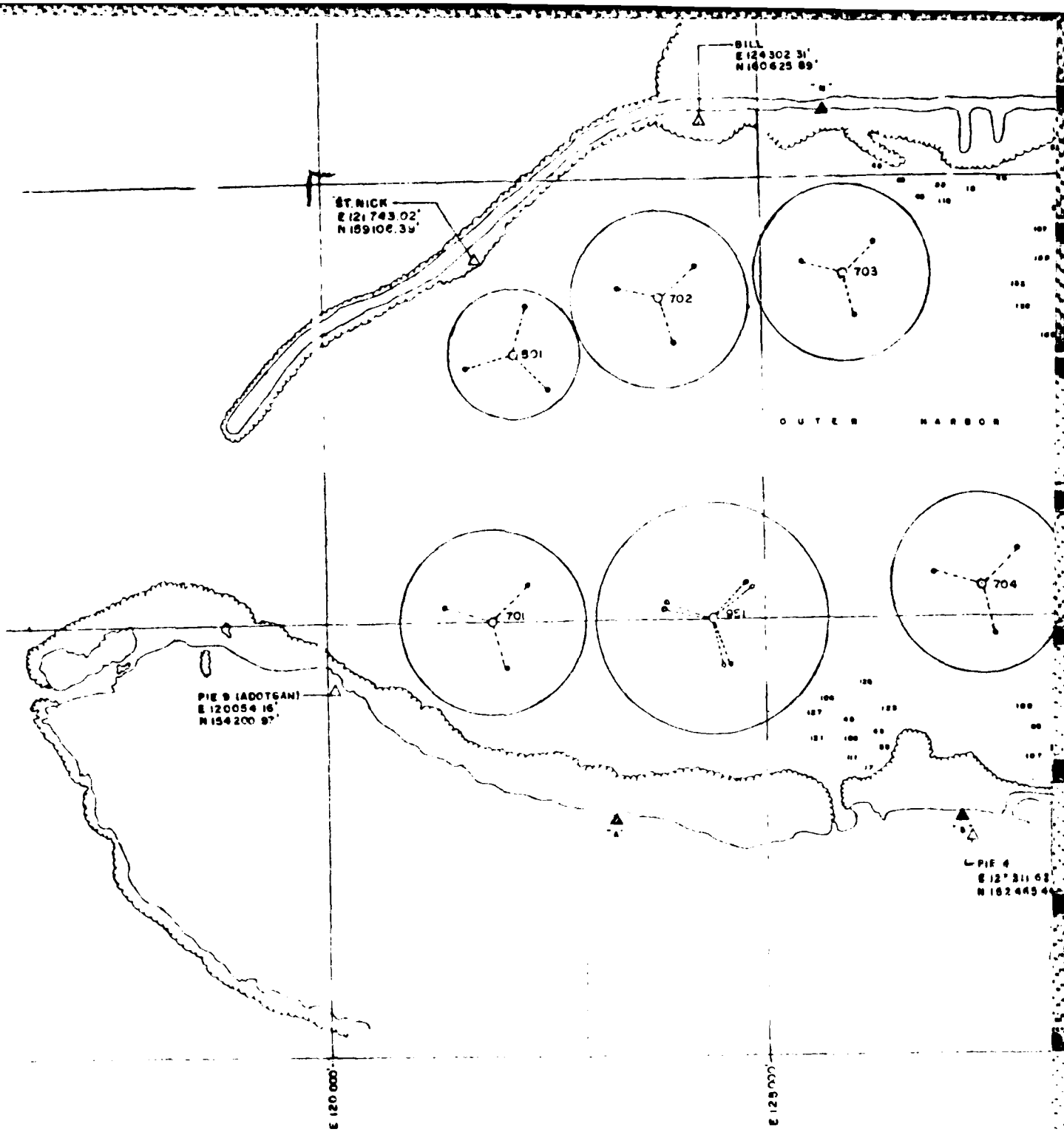
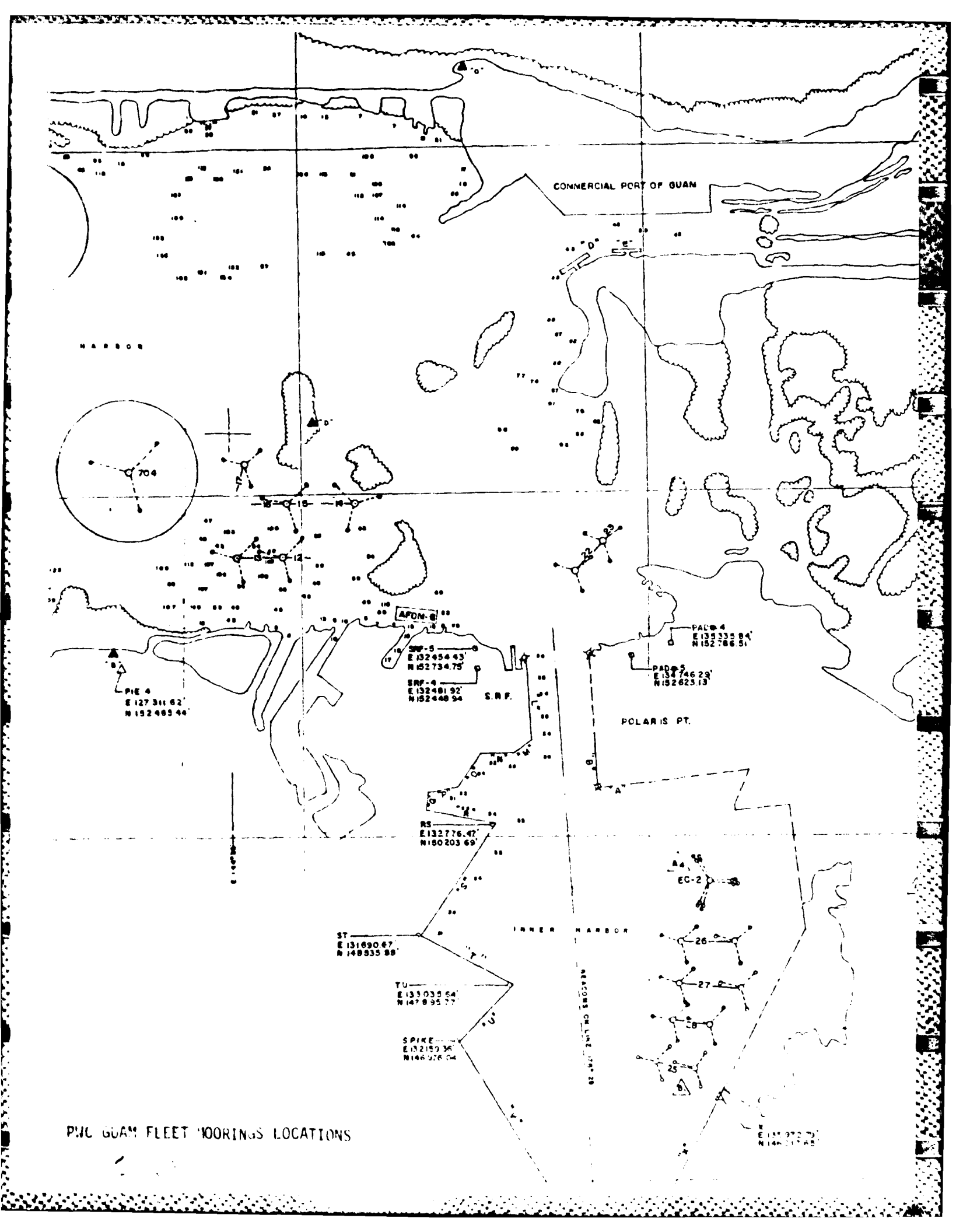
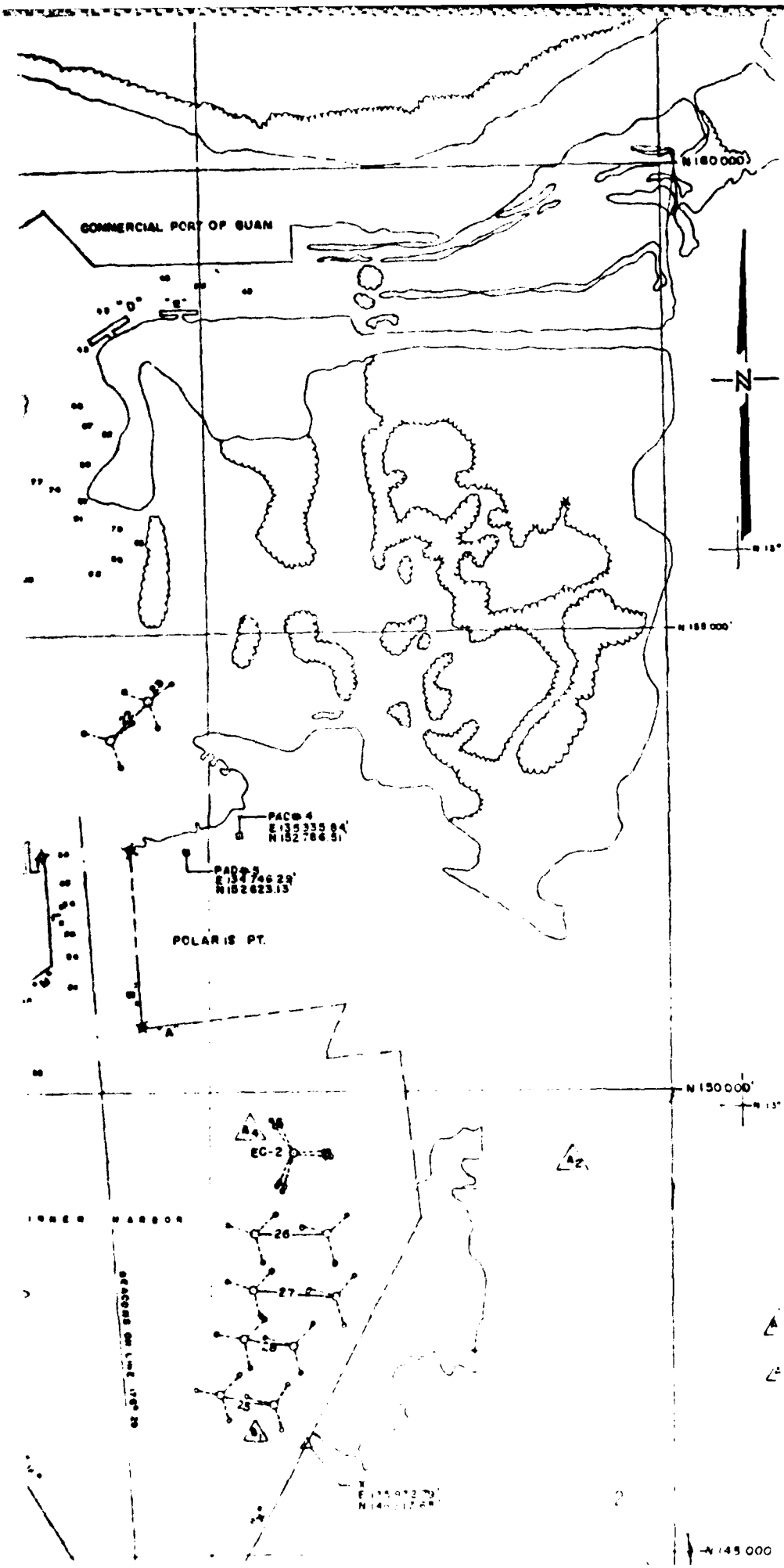


FIGURE 1. PUC GUAM FLEE


COMMERCIAL PORT OF GUAM
HARBOR
704
AFDM-6
SRF-5
E 132454.43'
N 152734.75'
SRF-4
E 132481.92'
N 152448.94'
S.R.F.
PIE 4
E 127311.62'
N 152465.44'
PAD 4
E 135335.84'
N 152786.51'
PAD 5
E 134746.29'
N 152623.13'
POLARIS PT.
RS
E 132776.47'
N 150203.69'
A4
EC-2
INNER HARBOR
ST
E 131690.67'
N 149535.88'
TU
E 133035.64'
N 147895.77'
SPIKE
E 132159.36'
N 146976.04'
26
27
28
25
BREAKERS ON LINE
PWC GUAM FLEET MOORINGS LOCATIONS


N 160 000'
COMMERCIAL PORT OF GUAM
N
N 155 000'
PAD # 4
E 135 335.84'
N 152 786.51'
PAD # 3
E 134 746.29'
N 152 623.13'
POLARIS PT.
N 150 000'
EC-2
INNER HARBOR
26
27
28
25
N 145 000'

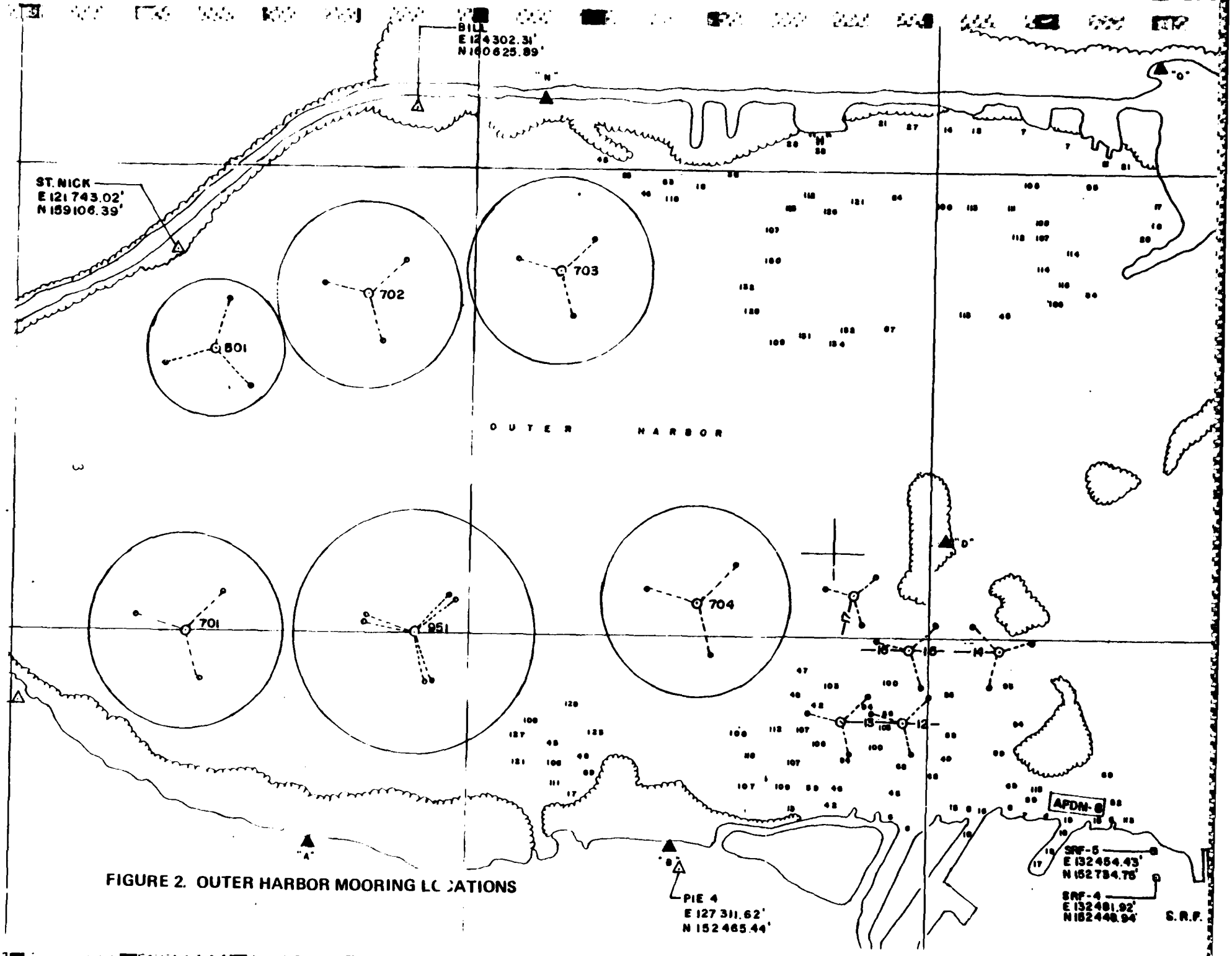


FIGURE 2. OUTER HARBOR MOORING LOCATIONS

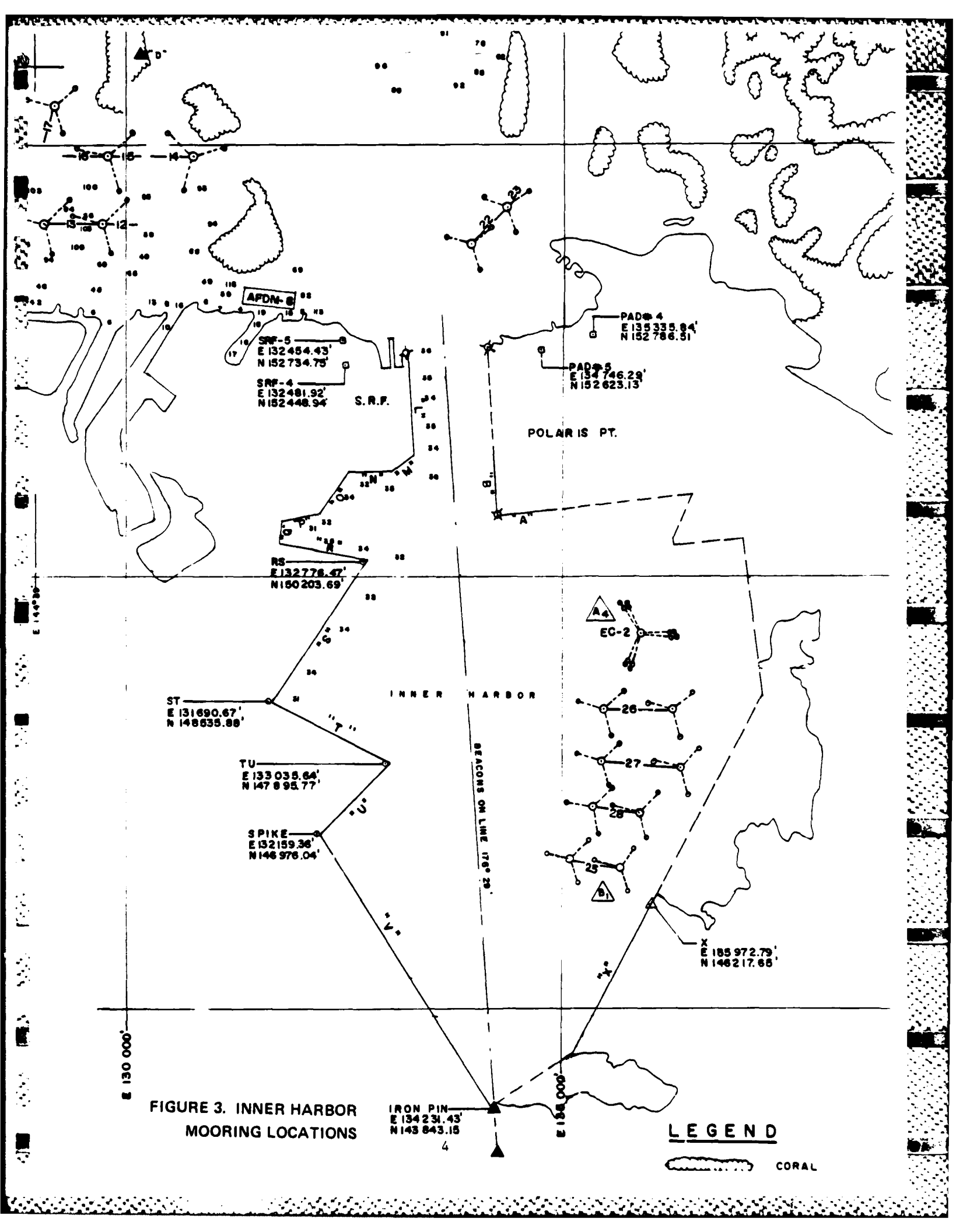


FIGURE 3. INNER HARBOR MOORING LOCATIONS

TABLE 1

PWC GUAM FLEET MOORINGS

Mooring Number	Mooring Class	Water Depth (Ft)	Date Installed	Date Last Overhaul	Reported Condition	Date Next Overhaul	Type Ships Moored
951	AAT	130	12/59	6/82	FAIR	6/88	AS-19
701	BR	125	4/59	1/81	GOOD	1/86	AFS-7
702	AR	150	6/57	2/82	GOOD	2/85	AFDL-21
703	BR	140	6/57	2/82	GOOD	2/87	–
704	ER	125	10/69	1973	POOR	4/84	–
501	BR	160	7/57	3/82	GOOD	3/87	–
25W	BR	36	4/53	2/81	GOOD	2/86	22 Cape Class
25E	BR	36	4/53	2/81	GOOD	2/86	YTB
26E	BR	32	9/53	3/82	GOOD	3/87	YTB
26W	BR	32	9/53	3/82	GOOD	3/87	SWOB
27E	BR	37	9/53	4/82	GOOD	4/87	–
27W	BR	32	9/53	4/82	GOOD	4/87	30 Balsam Class
28E	BR	36	9/53	9/82	GOOD	9/87	YFN, YC
28W	BR	36	9/53	9/82	GOOD	9/87	YPD
22	BR	70	9/53	8/82	GOOD	8/87	YON
22/23	BR	58	9/53	8/82	GOOD	8/87	–
12/13	DR	105	–	7/82	GOOD	7/87	–
13	DR	97	–	7/82	GOOD	7/87	–
14	DR	97	10/53	6/82	GOOD	6/87	YC
15/16	DR	97	10/53	9/82	GOOD	9/87	YTB
17	DR	69	9/53	5/82	GOOD	5/87	YON

NOTE: Mooring historical data provided by PWC GUAM, April 1983.

Chain wire diameter measurements are used to evaluate the condition of a mooring. After cleaning to bare metal, a selective sampling of the wire diameter of chain links and connecting hardware was taken in order to determine the amount of deterioration due to corrosion and wear. "Single link" measurements were taken where chain was slack to detect corrosion loss. "Double link" measurements were taken where two links connected under tension to detect the combined effects of corrosion and wear. Chain links and other components which measured 90 percent or greater of original wire diameter are considered to be in "good" condition; measurement between 80 percent and 90 percent of original diameter is considered "fair" condition and is cause for the mooring to be downgraded in classification; any measurement less than 80 percent is considered "poor" and is cause for the mooring to be declared unsatisfactory for fleet use.

Standard underwater inspection procedures do not call for the inspection of any part of the mooring which has been buried or which is below a water depth of 130 feet if scuba gear is used. Ground legs and risers were observed only to the point at which they became buried; no attempt was made to locate and inspect anchors or other mooring materials which were not readily visible. For clarification, schematic drawings of typical riser and telephone type moorings are shown in Figures 4 and 5 respectively.

2.2 **Buoy.**

2.2.1 **Buoy Topside.** Each buoy was inspected to determine its general condition. The buoy markings were checked for conformance to those noted in applicable charts. Physical damage such as holes, dents, or listing was described. The fiberglass was inspected for cracks, wear, peeling, or rust-bleeding. Hatches, openings, and penetrations were examined and worn material and rust were reported.

The buoy fenders and chafing rails were checked for integrity and secure connection to the buoy. Buoy top jewelry was measured with calipers to find the overall outside dimensions and areas of most severe reduction in wire size.

2.2.2 **Buoy Lower Portion.** Divers inspected the buoy below the waterline. The thickness of marine growth was recorded, 1-foot-square areas were selected and cleared of growth without damaging the fiberglass, and the condition of the fiberglass was noted.

2.3 **Riser.** To determine chain wear, each riser chain was inspected by taking three consecutive double link measurements, using precut gauges and/or calipers, at both ends and at the center of the riser. To determine original chain size, divers took single link caliper measurements of the wire diameter. Divers also documented the type of hardware connecting the riser chain to the sinker.

2.4 **Ground Ring.** When visible, the ground ring was examined for general and localized wear. Caliper measurements were made of the wire size in the region of most severe wear and across the inner diameter.

2.5 **Ground Legs.** To determine chain wear, three consecutive double link measurements were made at both ends and at the center of each leg until the chain was

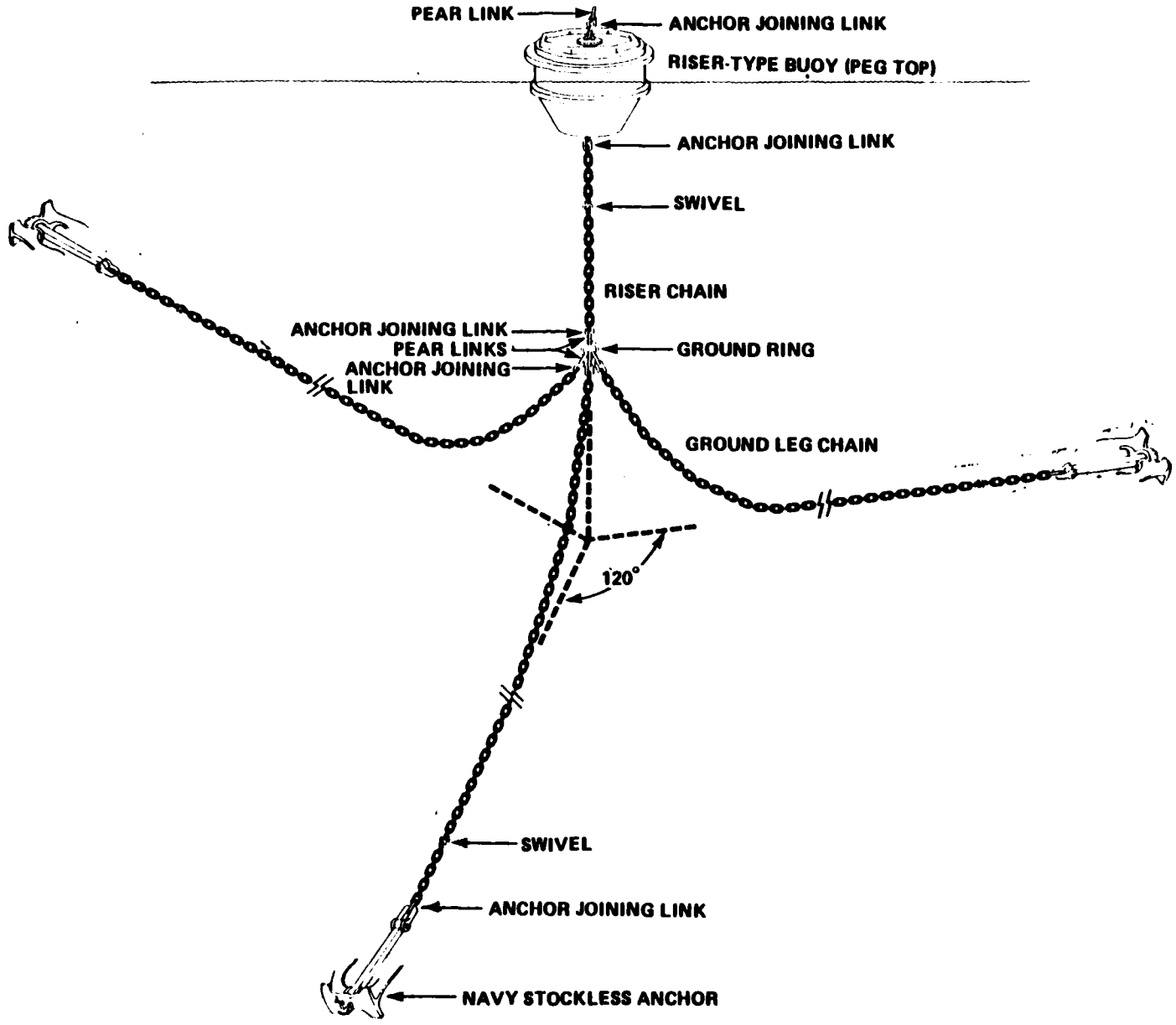


FIGURE 4. TYPICAL RISER-TYPE MOORING

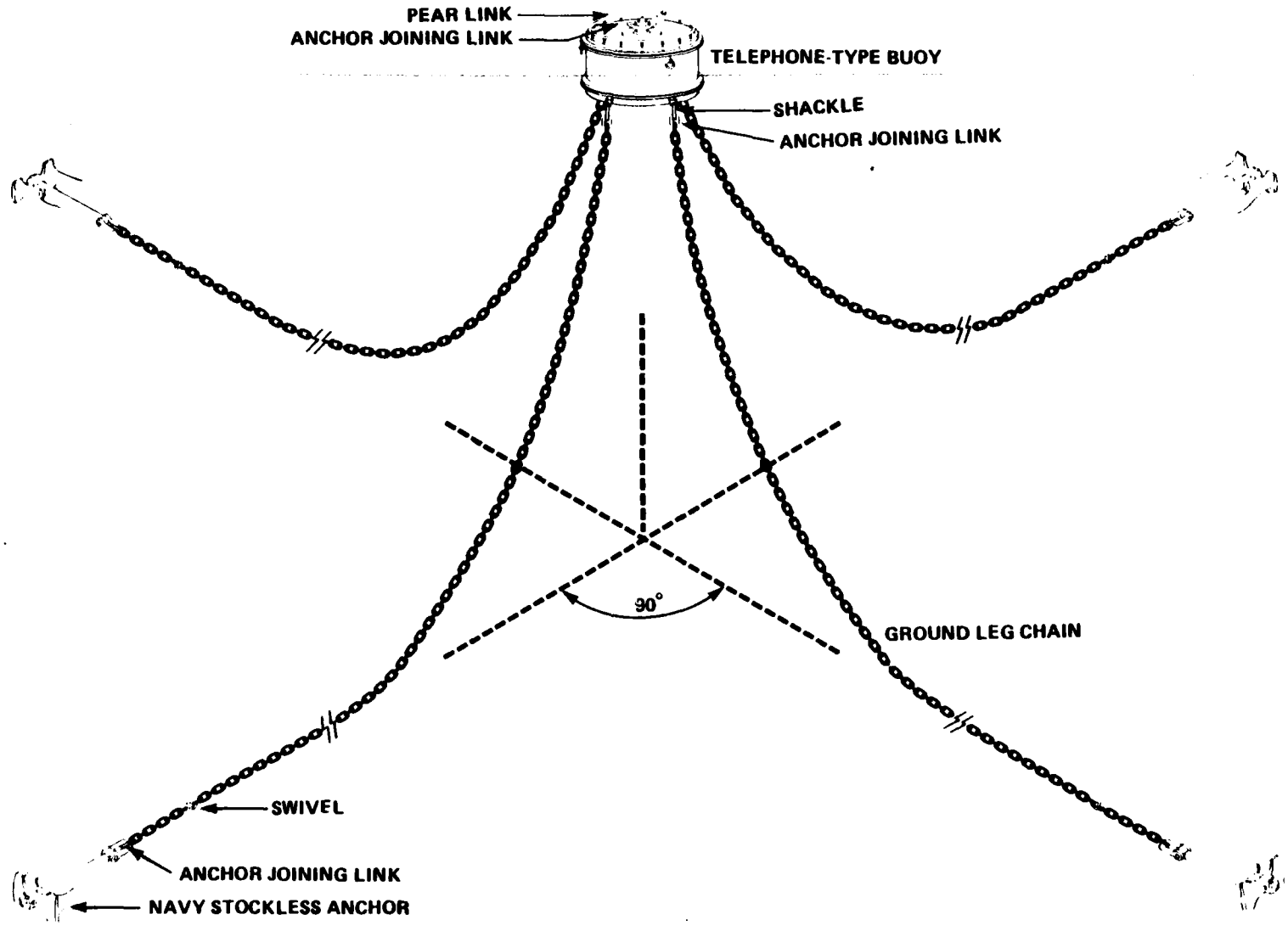


FIGURE 5. TYPICAL TELEPHONE-TYPE MOORING

buried in the seafloor. Where a segment of chain was resting on the bottom and was not in tension, single link measurements were taken instead of double link measurements. To determine original chain size, divers took single link caliper measurements of its wire diameter.

2.6 **Anchors.** No anchors were sighted during the course of the inspection.

3.0 INSPECTION SUMMARY

An in-depth discussion of the inspection results is presented in Annex A. Annex B contains photographs, and Annex C contains a copy of the preliminary report of the results of the inspection.

The data gathered during the inspection indicates the following:

- Of the 22 moorings inspected, 20 are in satisfactory condition for continued use at their current mooring classification level. Although usable, the other two require some maintenance rework. Table I presents the status of the PWC Guam fleet moorings.

- The riser chain of Mooring 704 is badly pitted and its buoy is in need of repairs.

- Although its components and assemblies are in good condition, the riser chain of Mooring 22 is entwined with about 40 feet of extraneous 2-inch wire rope.

- The material condition of Mooring 12/13 is good, but the orientation of its ground legs is questionable. Magnetic bearings of these three legs from the ground ring were found to be 029, 031, and 215 degrees.

- The top jewelry of Mooring 17 includes a shackle with a measured wire diameter of 1 1/2 inches. This is undersized for a class D mooring, which requires the wire size of all components to be a minimum of 2 inches.

- Buoy 28E is badly rusted, has a bent and rusted chafing rail, and has sustained some collision damage.

TABLE I

INSPECTION SUMMARY

MOORING NUMBER	MOORING CLASS	CONDITION			REMARKS
		GOOD	FAIR	POOR	
EC-2	CCR (MOD)	✔			
951	AAT	✔			
701	BR	✔			Oversize riser chain (2 3/4-inch)
704	ER		✔		Riser badly pitted. Mooring needs to be overhauled.
702	AR	✔			
703	BR	✔			Riser only inspected to a depth of 100 feet
22	BR	✔			About 40 feet of 2-inch wire rope is entwined with riser chain
22/23	BR	✔			
501	BR	✔			Riser only inspected to a depth of 100 feet
25E	BR	✔			
25W	BR	✔			
26E	BR	✔			
26W	BR	✔			
27E	BR	✔			Buoy has a 2-foot-wide, 2-inch-deep dent in hull
27W	BR	✔			
12/13	DR	✔			Orientation of the ground legs is questionable
13	DR	✔			
14	DR	✔			
15/16	DR	✔			
17	DR	✔			Divers only inspected mooring to the ground ring. Undersized shackle used in top hardware.
28E	BR		✔		Buoy needs refurbishment
28W	BR	✔			
	TOTALS	20	2	0	

- The ground legs of half of the mooring systems (11 of 22) were completely buried in the bottom and inaccessibile for inspection.

- None of the buoys or risers have cathodic protection systems. Although the ground legs of Mooring 27W are purported to have a cathodic protection system, the legs are buried and the presence of such a system could not be verified.

4.0 COMMENTS/RECOMMENDATIONS

As a result of an analysis of the data collected during the inspection, the following comments/recommendations are pertinent:

- In view of the deep pitting of its riser and the fact that Mooring 704 was previously downgraded from a class A to a class E mooring, recommend that this mooring be overhauled at the earliest opportunity.

- The wire rope entwined in the riser of Mooring 22 should be removed.

- The orientation of the legs of Mooring 12/13 should be checked during the next scheduled overhaul, and if necessary, the ground legs and anchors reinstalled in their designed locations.

- The undersized shackle in the top jewelry of Buoy 17 should be removed at the earliest possible time.

- Due to the generally poor condition of its exterior, Buoy 28E should be refurbished.

ANNEX A

MOORING INSPECTION RESULTS

This Annex contains for each mooring:

- A summation of the inspection data obtained by the CHESNAVFACENGCOM EIC and UCT TWO divers, and
- a diver data reporting form.

INSPECTION RESULTS
MOORING EC-2

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 40-inch freeboard. The bottom is covered with about 1 inch of marine growth and the top deck plate is rusted; otherwise the buoy is in good condition.

Riser

The riser is 3 1/2-inch chain. All double link measurements were greater than 90 percent of the chain's original wire diameter. There is moderate to heavy marine growth on the riser. A few feet of riser rests on the bottom before the chain enters the bottom.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a modified class CC mooring.

MOORING NO: EC-2 CLASS: CCR (MOD) LOCATION: PWC GUAM LAT: 13° 25' 54.7" N LONG: 144° 40' 10.4" E

WATER DEPTH: 38' ANCHOR SIZE/TYPE: 25K STOCKLESS BUOY TYPE: 12' x 9' 6"

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' - 10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											DRUM BUOY WITH HAWSE PIPE. 3' 4"
"F" SHACKLE W/LUGS			3½"	✓							FREEBOARD, 1" GROWTH ON BOTTOM.
SHACKLE PIN			3¾"	✓							BUOY TOP PLATE RUSTED. BUOY IN
PEAR LINK			3½"	✓							GOOD CONDITION.
RISER	NEAR BUOY		3½"				✓✓✓			10'	MOD TO HEAVY GROWTH. SWIVEL IN
	MIDDLE		↓				✓✓✓			21'	GOOD CONDITION. D.L. CALIPER 7"
	NEAR GRD RG		↓				✓✓✓			38'	SOME CHAIN ON BOTTOM PRIOR TO
GROUND RING											RISER ENTERING MUD
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE: 10 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: TZUCANOW / BRADSHAW

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 951

Buoy

This is a 17-foot-diameter telephone-type buoy. The buoy is fiberglass coated and has a 17-inch freeboard. Due to this relatively low freeboard, the fender is partially submerged. The buoy bottom is covered with only a light coating of marine growth and is in good condition.

Ground Legs

The mooring contains three pairs of ground legs (six legs). Each pair of legs is connected to the buoy by a spider plate and a single short length of chain to one of three buoy padeyes. Each leg consists of 2 3/4-inch chain and all single and double link measurements were greater than 90 percent of the original chain diameter. The three spider plates are in good condition. At 100 feet, the lowest depth to which the divers descended, leg E was observed to be about 10 feet above leg F.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class AA mooring.

MOORING NO: 951 CLASS: AAT LOCATION: PWC GUAM LAT: 13° 26' 51" N LONG: 144° 38' 13.7" E

WATER DEPTH: 130' ANCHOR SIZE/TYPE: 25K STOCKLESS BUOY TYPE: 17'x10' TELEPHONE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 50' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											17" FREEBOARD. FENDER PARIALLY
DETACHABLE LINK				4 3/4"							SUBMERGED. LIGHT GROWTH
PEAR LINK				3 1/2"							ON BOTTOM
RISER	NEAR BUOY		NA								
	MIDDLE		↓								
	NEAR GRD RG										
GROUND RING											
GROUND LEG NO A	UPPER END		2 3/4"	✓			✓			N10'	BEARING 050° M — SPIDER PLATE
	MIDDLE			✓			✓			48'	
	ENTERS BOTTOM			✓			✓			96'	
GROUND LEG NO B	UPPER END		2 3/4"	✓			✓			N10'	BEARING 055° M
	MIDDLE			✓			✓			48'	
	ENTERS BOTTOM			✓			✓			96'	
GROUND LEG NO C	UPPER END		2 3/4"	✓			✓			N10'	BEARING 160° M — SPIDER PLATE
	MIDDLE			✓			✓			48'	
	ENTERS BOTTOM			✓			✓			96'	
GROUND LEG NO D	UPPER END		2 3/4"	✓			✓			N10'	BEARING 162° M
	MIDDLE			✓			✓			48'	
	ENTERS BOTTOM			✓			✓			96'	

C-V-5

DATE: 14 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: DEMMING / REIST

MOORING NO. 951 CLASS. AAT LOCATION: PWC GUAM LAT: _____ LONG: _____ (CONTINUED)

WATER DEPTH: _____ ANCHOR SIZE/TYPE: _____ BUOY TYPE: _____

BOTTOM TYPE: ☐ SAND ☐ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							D	COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %				
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											
RISER	NEAR BUOY										
	MIDDLE										
	NEAR GRD RG										
GROUND RING											
GROUND LEG NO. E	UPPER END	2 3/4"		✓			✓			10'	BEARING 300° SPIDER PLATE
	MIDDLE	↓		✓			✓			48'	AT 100' DEPTH, LEG E IS 10' ABOVE
	ENTERS BOTTOM	↓		✓			✓			96'	LEG F
GROUND LEG NO. F	UPPER END	2 3/4"		✓			✓			10'	BEARING 315°
	MIDDLE	↓		✓			✓			48'	
	ENTERS BOTTOM	↓		✓			✓			96'	
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 14 JUNE 83 ENGINEER IN CHARGE A. J. DODSON DIVERS: DEMMING / REIST

INSPECTION RESULTS
MOORING 701

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 45-inch freeboard. The bottom has a one-half inch coating of marine growth. There is no rusting, and the buoy appears to be in good condition.

Riser

The riser consists of 2 3/4-inch chain which is one-half inch larger than required for a class B mooring. All single and double link measurements were greater than 90 percent of the chain's original wire diameter. The chain was inspected and measured to a water depth of 120 feet.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO. 701 CLASS BR LOCATION: PWC GUAM LAT: 13°-26'-51" N LONG: 144°-37'-48.5" E

WATER DEPTH: 157' ANCHOR SIZE/TYPE: 9K STATO BUOY TYPE: 12' x 6' DRUM

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 50' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 45" LIGHT (½") GROWTH
CHAIN			3"								ON BOTTOM. NO BUOY RUST
DETACHABLE LINK			3"								
PEAR LINK			4 3/8"								
DETACHABLE LINK			3 1/4"								
RISER	NEAR BUOY		2 3/4"	✓			✓			8'	S.L. 2 5/8" D.L 5 1/16"
	MIDDLE		↓	✓			✓			80'	
	NEAR GRD RG		↓	✓			✓			120'	
GROUND RING											
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 JUNE 83 ENGINEER IN CHARGE: A. J. DODSON DIVERS: HARDING

INSPECTION RESULTS
MOORING 704

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 40-inch freeboard. The chafing rail is bent and badly rusted in some areas. The bottom of the buoy is covered with 2 to 3 inches of marine growth. The fender is in good condition.

Riser

The riser consists of 2 3/4-inch chain, which is much larger than the 1 3/4-inch chain required for a class E mooring. Although single and double link measurements indicated that the chain links were about 90 percent of their original size, there were many areas of severe pitting, with some as large as 2 inches wide and an eighth of an inch deep. This pitting reduced the available wire diameter of the chain to between 80 and 90 percent of its original diameter.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

Due to anchor system problems, this mooring was downgraded from a class A to a class E mooring by PWC Guam personnel. In addition, a measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows this mooring to be still capable of withstanding class E mooring loads. However, it recommended that this mooring not be subjected to loads in excess of E class load limits as defined in NAVFACENGCOM Design Manual 26. It is further recomended that this mooring be overhauled and its riser chain replaced at the earliest practical time.

MOORING NO. 70A CLASS ER LOCATION: PWC GUAM LAT: 13°26'-54.5" N LONG: 144°-38'-44.8" E

WATER DEPTH: 125' ANCHOR SIZE/TYPE: 9K STATO BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 20' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											40" FREEBOARD. 2"-3" growth on bottom. FENDER OK. CHAFING RAIL BENT AND RUSTED BADLY IN SOME AREAS
PEAR LINK			2½"								
"F" SHACKLE W/LUGS			3⅛"								
RISER	NEAR BUOY		2¾"		✓			✓		10'	CHAIN MEASURED AT 2½"
	MIDDLE		↓		✓			✓		45'	LARGE AREAS OF SEVERE
	NEAR GRD RG		↓		✓			✓		95'	PITTING - SOME ⅛" DEEP BY 2" DIAMETER
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE 14 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: NELSON / SCHEUREN

INSPECTION RESULTS
MOORING 702

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 36-inch freeboard. The top deck plate is heavily rusted, and the bottom is covered with a thick marine growth . The fender is in good condition.

Riser

The riser consists of 2 3/4-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class A mooring.

MOORING NO.: 702 CLASS: AR LOCATION: PWC GUAM LAT: 13°-27'-37.1" N LONG: 144°-35'-08.1" E

WATER DEPTH: 150' ANCHOR SIZE/TYPE: 9K/STATO BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 50' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											FREEBOARD 36". FENDER GOOD.
"F" SHACKLE W/LUGS			3 3/4"								HEAVY RUST ON TOP DECK PLATING
FEAR LINK			3 3/8"								BUOY BOTTOM COVERED WITH HEAVY
											MARINE GROWTH.
RISER	NEAR BUOY		2 3/4"	✓			✓			8'	S.L. 2 3/4" D.L. 5 1/4"
	MIDDLE		↓	✓			✓			45'	S.L. 2 3/4" D.L. 5 1/4"
	NEAR GRD RG		↓	✓			✓			95'	S.L. 2 3/4" D.L. 5 1/4"
GROUND RING											DETACHABLE LINK AT 100'. DIVERS
GROUND LEG NO. A	UPPER END										DID NOT GO BELOW 100' DEPTH.
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE 14 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: HARDING/TZUCANOW

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 703

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with hawsepipe. The buoy is painted with standard colors and has a 34-inch freeboard. The lower hull is covered with about 2 1/2 inches of soft marine growth. Overall, the buoy is in good condition.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A swivel was observed at 15 feet.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO. 703 CLASS: BR LOCATION: PWC GUAM LAT: 13°-27'-29.9" LONG: 144°-38'-24.5"

WATER DEPTH: 140' ANCHOR SIZE/TYPE: 9K STATO BUOY TYPE: 12'X6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 20+ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							D	COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %				
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 34", 2½" GROWTH ON BOTTOM. FENDER OK. SWIVEL AT 15'.
DETACHABLE LINK			3"								
"F" SHACKLE W/LUGS			3"								
PEAR LINK			3⅜"								
RISER	NEAR BUOY		2½"	✓			✓			7'	SWIVEL NOTED AT 15'
	MIDDLE		↓	✓			✓			45'	
	NEAR GRD RG		↓	✓			✓			95'	
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE 14 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: NELSON/SCHEUREN

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 22

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 42-inch freeboard. The buoy has only a light marine growth (one-quarter inch) on its bottom. Buoy is in good condition.

Riser

Riser is 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's initial wire size. From just below the buoy, about 40 feet of 2-inch wire rope is tightly entwined with the riser chain. The riser enters the bottom at a water depth of 70 feet.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO. 22 CLASS BR LOCATION: PWC GUAM LAT: 13° 26' 37.7" N LONG: 144° 39' 50.6" E

WATER DEPTH: 70' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 30' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 42". FENDER OK.
PEAR LINK			3 1/4"								LIGHT GROWTH (1/4") ON BOTTOM.
DETACHABLE LINK			3 3/16"								
CHAIN			2 3/8"								
RISER	NEAR BUOY		2 1/2"	✓			✓			<10'	40' OF 2" WIRE ROPE TIGHTLY
	MIDDLE		↓	✓			✓			35'	ENTWINED WITH CHAIN.
	NEAR GRD RG		↓	✓			✓			70'	
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 11 JUNE 83 ENGINEER IN CHARGE A.J. DODSON DIVERS: SCHEUREN / RIEST

CIVILNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 22/23

Buoy

This is a 10-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 32-inch freeboard. The buoy is in good condition.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A swivel was observed to be in good condition at a water depth of 15 feet, and a 4 1/2-inch ground ring was located at a depth of 40 feet.

Ground Legs

The upper 50 feet or so of three ground legs were visible. All legs were 2 1/2-inch chain and all measurements taken were larger than 90 percent of the original diameters. At their attachment to the ground ring, two of the legs are side-by-side.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO. 22/23 CLASS BR LOCATION: PWC GUAM LAT: 13°26'439"N LONG: 144°39'579"E

WATER DEPTH: 58 ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 10' x 6'5" DRUM

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 15-50' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 32". FENDER GOOD
RISER	NEAR BUOY		2½"	✓			✓			<10'	S.L 2½" D.L. 5" SWIVEL AT 15'
	MIDDLE		↓	✓			✓			25'	S.L. 2½ D.L. 5"
	NEAR GRD RG		↓	✓			✓			38'	S.L. 2½" D.L. 4¾"
GROUND RING			4½"	✓						40'	4½"
GROUND LEG NO A	UPPER END		2½"	✓			✓			50'	S.L 2½" D.L. 4¾" BEARING 015° M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END		2½"	✓			✓			50'	S.L 2½" D.L 5" BEARING 150° M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END		2½"	✓			✓			62'	S.L. 2½" D.L. 5" BEARING 295° M
	MIDDLE										
	ENTERS BOTTOM										ABOUT 40' OF EACH GROUNDLEG ARE
GROUND LEG NO D	UPPER END										VISIBLE AND SUSPENDED ABOVE THE
	MIDDLE										BOTTOM BEFORE ENTERING THE MUD
	ENTERS BOTTOM										

DATE 11 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: NELSON/HARDING

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 501

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 36-inch freeboard. The bottom of the buoy has only a light coating of marine growth. Overall, the buoy is in good condition.

Riser

The riser consists of 2 1/2-inch chain and all measurements were larger than 90 percent of the chain's original wire size. The chain was only inspected to a water depth of 100 feet.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO. 501 CLASS BR LOCATION: PWC GUAM LAT 13°-27'-21.1" N LONG: 144°-37'-51" E

WATER DEPTH: 160' ANCHOR SIZE/TYPE: 20K/STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 40' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							D	COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %				
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											36" FREEBOARD, LIGHT GROWTH.
"E" SHACKLE W/LUGS			3 5/8"								FENDER GOOD
PEAR LINK			3 1/4"								
RISER	NEAR BUOY		2 1/2"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			45'	DETACHABLE LINK AT 45'
	NEAR GRD RG		↓	✓			✓			95'	
GROUND RING											
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 14 JUNE 83 ENGINEER IN CHARGE: A. J. DODSON DIVERS: HARDING/TZUCANOW

INSPECTION RESULTS
MOORING 25E

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 35-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 3/4-inch-diameter ground ring was found on the bottom at a water depth of 42 feet.

Ground Legs

The upper few links of three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO. 25E CLASS BR LOCATION: PWC GUAM LAT: _____ LONG: _____

WATER DEPTH: 42' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 1'-50' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											FREEBOARD 35". FENDER GOOD
PEAR LINK			2 5/8"								
ANCHOR JOINING LINK			2 5/8"								
RISER	NEAR BUOY		2 1/2"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			30'	
	NEAR GRD RG		↓	✓			✓			42'	
GROUND RING			4 3/4"	✓						42'	
GROUND LEG NO A	UPPER END		2 1/2	✓			✓			42'	D.L. 5" BEARING 030°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END		2 1/2	✓			✓			42'	D.L. 5" BEARING 155°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END		2 1/2	✓			✓			42'	D.L. 5" BEARING 300°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 10 JUNE 83 ENGINEER IN CHARGE A.J. DODSON DIVERS: DEMMING/REIST

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT,"

INSPECTION RESULTS
MOORING 25W

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 35-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 1/2-inch diameter ground ring was found on the bottom at a water depth of 41 feet.

Ground Legs

The upper few links of three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO: 25 W CLASS: BR LOCATION: PWC GUAM LAT: _____ LONG: _____

WATER DEPTH: 41' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HALOSEPITE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											38" FREEBOARD. FENDER GOOD
DETACHABLE LINK			3'	✓							
RISER	NEAR BUOY		2½"	✓			✓			<10'	SWIVEL AT 7'
	MIDDLE		↓	✓			✓			20'	
	NEAR GRD RG		↓	✓			✓			40'	
GROUND RING			4½"	✓						41'	
GROUND LEG NO A	UPPER END		2½"	✓			✓			41'	BEARING 080° M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END		2½"	✓			✓			41'	BEARING 160° M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END		2½"	✓			✓			41'	BERING 350° M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 10 JUNE 93 ENGINEER IN CHARGE: A.J. DODSON DIVERS: TORRENS/NELSON

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 26E

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 45-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 1/2-inch-diameter ground ring was found on the bottom at a water depth of 37 feet.

Ground Legs

The upper few links of three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO: 26E CLASS: BR LOCATION PWC GUAM LAT: 13°-25'-46.2" N LONG: 144°-40'-14.1" E

WATER DEPTH: 38' ANCHOR SIZE/TYPE: 30K STOCKLESS BUOY TYPE: 13'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 45" FENDER GOOD
CHAIN LINK			3"	✓							GROWTH ½"–1"
SHACKLE			3¾"	✓							
PEAR LINK			4"	✓							
RISER	NEAR BUOY		2½"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			20'	SWIVEL AT 23'
	NEAR GRD RG		↓	✓			✓			37'	
GROUND RING			4½"	✓						37'	
GROUND LEG NO. A	UPPER END		2½"	✓			✓			38'	BEARING 080°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END		2½"	✓			✓			38'	BEARING 165°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END		2½"	✓			✓			38'	BEARING 300°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 10 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: NELSON/TORRENS

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 26W

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 45-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 9/16-inch diameter ground ring was found on the bottom at a water depth of 38 feet.

Ground Legs

About 10 feet of each of the three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO: 26W CLASS: BR LOCATION: PWC GUAM AT: 13°25'46.2"N LONG: 144°40'14.1"E

WATER DEPTH: 38' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											45" FREEBOARD, GROWTH ½"-1".
CHAIN LINK			3"								
SHACKLE			3⅛"								
RISER	NEAR BUOY		2½"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			20'	2¾" SWIVEL AT 22'
	NEAR GRD RG		↓	✓			✓			38'	
GROUND RING			4 9/16"							38'	22" DIAMETER
GROUND LEG NO. A	UPPER END		2½"	✓			✓			38'	BEARING 080°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END		2½"	✓			✓			38'	BEARING 165°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END		2½"	✓			✓			38'	BEARING 345°M
	MIDDLE										
	ENTERS BOTTOM										~10' OF EACH GROUND LEG
GROUND LEG NO. D	UPPER END										VISIBLE
	MIDDLE										
	ENTERS BOTTOM										

DATE 10 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: AUSTIN/SCHEUREN

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT,".

INSPECTION RESULTS
MOORING 27E

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 38-inch freeboard. The buoy hull has a 2-foot-wide, 2-inch-deep dent just below the fender. However, there is no rust and the fiberglass covering the dent is still intact. There is only a light coating of marine growth (one-quarter inch) on the buoy's bottom.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 1/2-inch diameter ground ring was found near the bottom at a water depth of 30 feet.

Ground Legs

The upper few links of three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO.: 27E CLASS: BR LOCATION: PWC GUAM LAT: 13°-25'-39.6"N LONG: 144°-40'-14.9"E

WATER DEPTH: 31' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAUSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 2' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											38" FREEBOARD. FIBERGLASS.
											BUOY HULL HAS 2' DIAMETER
											2" DEEP DENT NEAR FENDER
											(FIBERGLASS INTACT. LIGHT (1/4")
											GROWTH.
RISER	NEAR BUOY		2½"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			20'	
	NEAR GRD RG		↓	✓			✓			30'	
GROUND RING			4½"							30'	LEG A BEARING 035°M
GROUND LEG NO. A	UPPER END		2½"	✓			✓			31'	FEW FEET OF EACH GROUND
	MIDDLE										LEG VISIBLE BEFORE
	ENTERS BOTTOM										ENTERING BOTTOM.
GROUND LEG NO. B	UPPER END		2½"	✓			✓			31'	BEARING 155°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END		2½"	✓			✓			31'	BEARING 300°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 10 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: DEMMING/REIST

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT,"

INSPECTION RESULTS
MOORING 27W

Buoy

This is a 12-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 37-inch freeboard. There is some rust on the chafing rail but the general condition of the buoy is good.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 3-inch-diameter ground ring was found near the bottom at a water depth of 38 feet.

Ground Legs

The upper few feet of each of three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO.: 27W CLASS: BR LOCATION: PWC GUAM LAT: 13°-35'-40.4"N LONG: 144°-40'-05.8"E

WATER DEPTH: 40' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAWSE PIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility: 15'-20' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											37" FREEBOARD. RUSTON
"F" SHACKLE			3 7/8"								CHAFING RAIL. FENDER GOOD
PEAR LINK			3 3/8"								
RISER	NEAR BUOY		2 1/2"	✓			✓			<10'	D.L. 5"
	MIDDLE		↓	✓			✓			20'	D.L. 5"
	NEAR GRD RG		↓	✓			✓			38'	D.L. 4 3/4"
GROUND RING			3"							38'	
GROUND LEG NO. A	UPPER END		2 1/2"							40'	BEARING 056°M D.L. 4 3/4"
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END		2 1/2"							40'	BEARING 180°M D.L. 4 3/4"
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END		2 1/2"							40'	BEARING 290°M D.L. 4 3/4"
	MIDDLE										
	ENTERS BOTTOM										ONLY FEW FEET EACH LEG
GROUND LEG NO. D	UPPER END										VISIBLE. DUE TO BURIAL IN MUD,
	MIDDLE										ANODES PURPORTEDLY ON GROUND
	ENTERS BOTTOM										LEGS WERE NOT VISIBLE FOR INSPECTION

DATE: 10 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: BRADSHAW/TZUCANOW

INSPECTION RESULTS
MOORING 12/13

Buoy

This is a 9-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 18-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2 -inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 1/2-inch diameter ground ring was found on the bottom at a water depth of 98 feet.

Ground Legs

The upper 10 feet of each of the three ground legs were visible before the chain entered the bottom. All three legs were 2 -inch chain and all measurements were larger than 90 percent of the original wire diameter. The leg bearings are 029, 031, and 215 degrees, although a 120-degree separation of the ground legs is desired.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class D mooring. However, the orientation of the ground legs should be checked during the next overhaul and these legs reinstalled if required.

MOORING NO. 12/13 CLASS: DR LOCATION: PWC GUAM LAT: 13°-26'-41" N LONG: 144°-39'-02.6" E

WATER DEPTH: 98' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 9'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 40' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 18". FENDER GOOD
PEAR LINK			2 3/4"								1" GROWTH ON BOTTOM
"F" SHACKLE W/LUGS			2 1/8"								
(PIN) SHACKLE			2 1/8"								
RISER	NEAR BUOY		2"	✓			✓			8'	
	MIDDLE		2"	✓			✓			45'	
	NEAR GRD RG		2"	✓			✓			92'	
GROUND RING			4 1/2"							98'	24" DIAMETER
GROUND LEG NO. A	UPPER END		2"	✓			✓			98'	BEARING 029°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END		2"	✓			✓			98'	BEARING 03.°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END		2"	✓			✓			98'	BEARING 215°M
	MIDDLE										
	ENTERS BOTTOM										EACH LEG VISIBLE FOR ABOUT
GROUND LEG NO D	UPPER END										10' ON BOTTOM. LEGS VERY TAUGHT
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: TZUCANOW/SCHEUREN

INSPECTION RESULTS
MOORING 13

Buoy

This is a 9-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 32-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 1/2-inch-diameter ground ring was found on the bottom at a water depth of 105 feet.

Ground Legs

The upper few links of three ground legs were measured with calipers. All three legs were 2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class D mooring.

MOORING NO. 13 CLASS DR LOCATION: PWC GUAM LAT: 13°36'-42"N LONG: 144°39'-01"E

WATER DEPTH: 112' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 9'x6' DRUM W/HAUSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 20' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											FREEBOARD 32", FENDER GOOD. 1" GROWTH ON BOTTOM.
"F" SHACKLE W/LUGS			2 3/4"								
PEAR LINK			2 3/8"								
RISER	NEAR BUOY		2"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			50'	
	NEAR GRD RG		↓	✓			✓			105'	SWIVEL AT 83'
GROUND RING			4 1/2"							105'	
GROUND LEG NO A	UPPER END		2"	✓			✓			105'	BEARING 070°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END		2"	✓			✓			105'	BEARING 160°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END		2"	✓			✓			105'	BEARING 270°M
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: DEMMING/TORRENS

INSPECTION RESULTS
MOORING 14

Buoy

This is a 9-foot-diameter fiberglass-coated drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 30-inch freeboard. There is a 1- to 3-inch marine growth on its bottom. Overall, this buoy is in good condition.

Riser

The riser consists of 2-inch chain. All measurements taken were larger than 90 percent of the chain's original wire size. The riser vertically enters the bottom at a water depth of 97 feet.

Ground Ring/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class D mooring.

MOORING NO.: 14 CLASS: DR LOCATION: PWC GUAM LAT: 13°-26'-49.7" N LONG: 144°-39'-18" E

WATER DEPTH: 97' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 9'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☐ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 40' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											FREEBOARD 30". FENDER GOOD
"F" SHACKLE W/LUGS			3½"								GROWTH 1" to 3"
PEAR LINK			3¼"								
RISER	NEAR BUOY		2"	✓			✓			5'	
	MIDDLE		↓	✓			✓			45'	
	NEAR GRD RG		↓	✓			✓			97'	SWIVEL AT 97'
GROUND RING											
GROUND LEG NO A	UPPER END										GROUND RING / GROUND LEGS / ANCHORS
	MIDDLE										NOT VISIBLE.
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE: 13 JUNE 83 ENGINEER IN CHARGE: A. J. DODSON DIVERS: AUSTIN / REIST

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 15/16

Buoy

This is a 9-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 27-inch freeboard. Except for some light marine growth on the bottom, the buoy is in good condition.

Riser

The riser consists of 2-inch chain. Single and double link measurements were all greater than 90 percent of the chain's original wire size. The riser enters the bottom at a depth of 97 feet.

Ground Ring/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class D mooring.

MOORING NO. 15/16 CLASS. DR LOCATION: PWC GUAM LAT: 13°-26'-49.7" N LONG: 144°-39'-08.4" E

WATER DEPTH: 97 ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 9'x6' DBUH W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											27" FREEBOARD. LIGHT GROWTH ON
DETACHABLE LINK			2½"								BOTTOM
DETACHABLE LINK			2"	✓							
PEAR LINK			2⅞"	✓							
RISER	NEAR BUOY		2"	✓			✓			<10'	S.L 1⅞" D.L 3¾"
	MIDDLE		↓	✓			✓			60'	D.L 3¾"
	NEAR GRD RG		↓	✓			✓			92'	D.L. 3¾"
GROUND RING											
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE 13 JUNE 83 ENGINEER IN CHARGE: A.J. DODSON DIVERS: SPEAR/BRADSHAW

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS
MOORING 17

Buoy

This is a 9-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy has a 20-inch freeboard and has a light coating of marine growth on the hardware. A 1 1/2-inch shackle in the top jewelry is attached to a lug of a larger 2 5/8-inch shackle. Overall the buoy is in good condition.

Riser

The riser consists of 2-inch chain. Single and double link measurements were all greater than 90 percent of the chain's initial wire diameter. A 4 1/2-inch wire size ground ring was located at a water depth of 81 feet. The bottom was estimated to be about 15 feet below the ground ring.

Ground Leg/Anchors

Not inspected.

Recommendation

This mooring is in satisfactory condition for continued use as a class D mooring. However, since all components of a class D mooring should have, as a minimum, a wire size of 2 inches, recommend that the 1 1/2-inch shackle be removed from the top jewelry to preclude a vessel inadvertently mooring to an undersized component.

MOORING NO. 17 CLASS DR LOCATION: NAVSTA GUAM LAT: 13°-26'-53.4" N LONG: 144°-39'-02.2" E

WATER DEPTH: 96' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 9'x6' DRUM W/ HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											20" FREEBOARD. FENDER GOOD.
"E SHACKLE W/LUGS			2 5/8"								1/2" GROWTH ON BOTTOM
SHACKLE PIN			3"								
PEAR LINK			2 9/16"								
SHACKLE			1 1/2"	(ATTACHED TO LUG OF LARGE SHACKLE)							
RISER	NEAR BUOY		2	✓			✓			<10'	
	MIDDLE		↓	✓			✓			45'	
	NEAR GRD RG		↓	✓			✓			80'	SWIVEL AT 63'
GROUND RING			4 1/2"							81'	DIVERS ONLY WENT TO GROUND
GROUND LEG NO. A	UPPER END										RING, DID NOT MEASURE LEG
	MIDDLE										CHAIN DIAMETERS. HOWEVER, DID
	ENTERS BOTTOM										GET LEG BEARINGS:
GROUND LEG NO. B	UPPER END										LEG A 120° M
	MIDDLE										↓ B 260° M
	ENTERS BOTTOM										↓ C 310° M
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE 13 JUNE 83 ENGINEER IN CHARGE: AJ DODSON DIVERS: DEMMING/TORRENS

CHESNAVFACENGCOM REPORT FPR-1-83(32), "PWC GUAM FLEET MOORING UNDERWATER INSPECTION REPORT,"

INSPECTION RESULTS
MOORING 28E

Buoy

This is a 9-foot-diameter fiberglass-coated drum-type buoy with a tension bar. The buoy is painted with standard colors and has a 19-inch freeboard. The top plate and top jewelry are badly rusted, and the chafing rail is bent. The buoy has been slightly damaged and has a one-half-inch-deep dent through the fiberglass. The dent is heavily rusted, the fiberglass is chipped, and the metal below the chipped area is deteriorating.

Riser

The riser consists of 2 1/2-inch chain. Single and double link measurements were all larger than 90 percent of the chain's initial wire size. The riser vertically enters the bottom at a water depth of 32 feet.

Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring. However, the buoy is in need of refurbishment.

MOORING NO: 28E CLASS: BR LOCATION: PWC GUAM LAT: 13°-25'-34.6" N LONG: 144°-40'-10" E

WATER DEPTH: 32' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 9'x6' DRUM W/ HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											19" FREEBOARD. TOP PLATE BADLY
"F" SHACKLE W/ LUGS			3 5/8"								RUSTED. CHAFING RAIL BENT. BUOY
PIN SHACKLE			2 3/4"								DAMAGED. HAS 1/2" DENT WITH
FEAR LINK			3 3/4"								CORRODING METAL SHOWING
RISER	NEAR BUOY		2 1/8"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			16'	
	NEAR GRD RG		↓	✓			✓			32'	
GROUND RING											
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									

DATE: 10 JUNE 83 ENGINEER IN CHARGE: A. J. DODSON DIVERS: COTELESSA / HARDING

INSPECTION RESULTS
MOORING 28W

Buoy

This is a 12-foot-diameter drum-type buoy with a hawsepipe. The buoy is painted with standard colors and has a 34-inch freeboard. The general condition of the buoy is good.

Riser

The riser consists of 2 1/2-inch chain. All single and double link measurements were larger than 90 percent of the chain's original wire size. A 4 5/8-inch diameter ground ring was found near the bottom at a water depth of 30 feet.

Ground Legs

The upper 10 feet of the three ground legs were visible before the chain entered the bottom. All three legs were 2 1/2-inch chain and all measurements were larger than 90 percent of the original wire diameter.

Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class B mooring.

MOORING NO.: 28W CLASS: BR LOCATION: PWC GUAM LAT: 13°-25'-34.9" N LONG: 144°-40'-04.6" E

WATER DEPTH: 36' ANCHOR SIZE/TYPE: 20K STOCKLESS BUOY TYPE: 12'x6' DRUM W/HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10' D = depth NI = not inspected, inaccessible

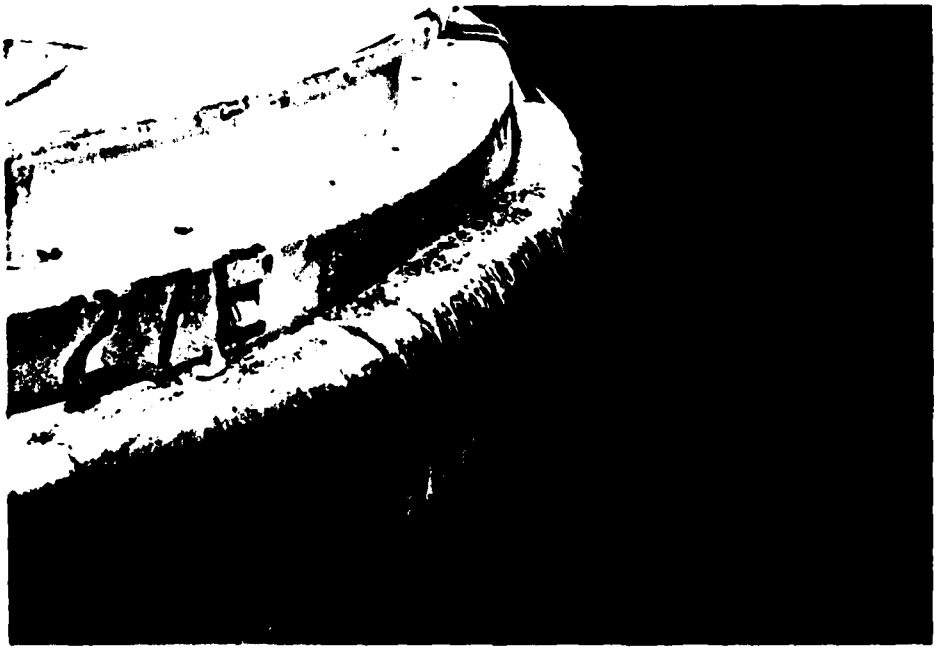
COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											34" FREEBOARD. FENDER GOOD.
SPIDER			3"								1/2" MARINE GROWTH
SPIDER	SPIDER		3"								
2 PEAR	2 PEAR		2 1/2"								
U/W DETACHABLE			3 3/8"								
RISER	NEAR BUOY		2 1/2"	✓			✓			<10'	
	MIDDLE		↓	✓			✓			20'	2 7/8" SWIVEL AT 15' – 25" LONG
	NEAR GRD RG		↓	✓			✓			30'	
GROUND RING			4 5/8"							30'	24" DIAMETER
GROUND LEG NO. A	UPPER END		2 1/2"	✓			✓			31'	BEARING 050° M
	MIDDLE										
	ENTERS BOTTOM		2 1/2"	✓			✓			36'	
GROUND LEG NO. B	UPPER END		2 1/2"	✓			✓			31'	BEARING 165° M
	MIDDLE										
	ENTERS BOTTOM		2 1/2"	✓			✓			36'	
GROUND LEG NO. C	UPPER END		2 1/2"	✓			✓			31'	BEARING 270° M
	MIDDLE										
	ENTERS BOTTOM		2 1/2"	✓			✓			36'	
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 10 JUNE 83 ENGINEER IN CHARGE: AJ DODSON DIVERS: AUSTIN/SCHEUREN

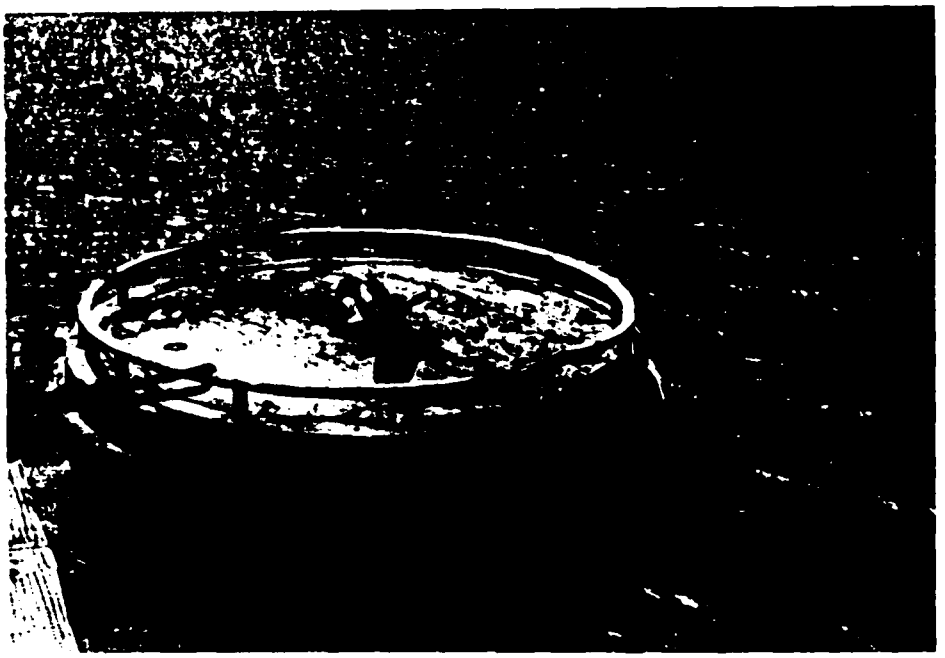
ANNEX B

PHOTOGRAPHS

Marine Growth on the Bottom of Buoy 701.
This is Typical of the Condition of Most Buoy Hulls



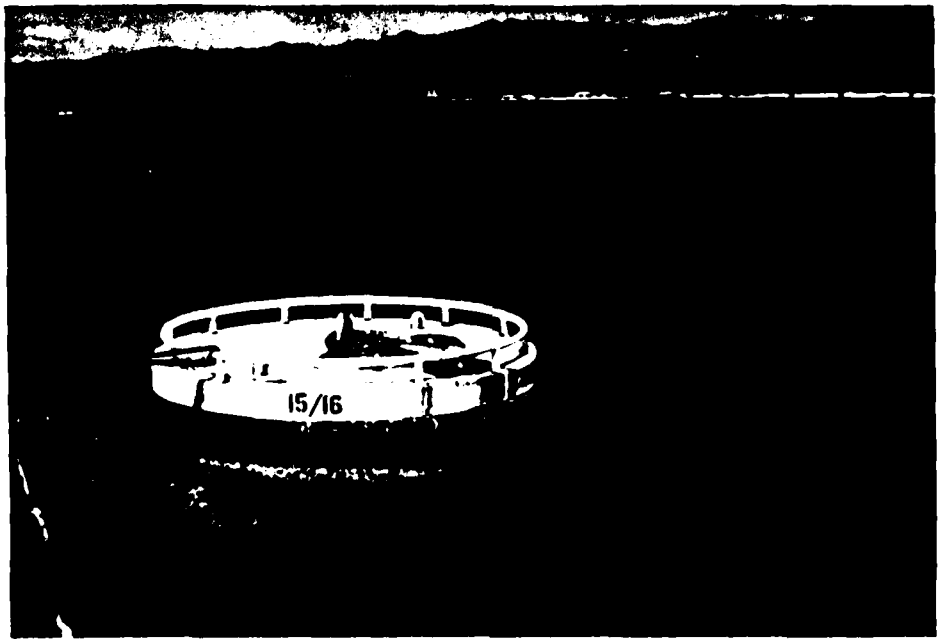
Damaged Fender and Upper Hull of Buoy 27E



Heavy Rusting of Top Deck and Jewelry of Buoy 28E

Ground Ring of Mooring 22/23.
Note that Two Legs are Together at Their Attachment to the Ring

Swivel in the Riser of Mooring 15/16



Typical Good Condition of Recently Overhauled Buoys

ANNEX C

REFERENCES

UNCLASSIFIED

01 01 PP UUUU 1961200

FROM CHESNAVFACENGCOM WASHINGTON DC

TO PWC GUAM

INFO COMNAVFACENGCOM ALEXANDRIA VA

PACNAVFACENGCOM PEARL HARBOR HI

UNCLAS //N11000//

SUBJ: FLEET MOORING INSPECTION

1. A CHESNAVFACENGCOM/UCT TWO UNDERWATER INSPECTION OF THE 22 FLEET MOORINGS LOCATED AT GUAM WAS CONDUCTED DURING THE PERIOD 6-14 JUNE 1983. THIS IS A PRELIMINARY REPORT OF THE INSPECTION RESULTS. FINDINGS ARE AS FOLLOWS:

A. MOORINGS 951, 701, 702, 703, 22, 22/23, 501, 25E, 25W, 26E, 26W, 27E, 27W, 12/13, 13, 14, 15/16, 17, 28E, 28W, EC-2: GOOD CONDITION.

B. MOORING 704: RECOMMEND OVERHAUL AS PLANNED TO UP GRADE MOORING TO ORIGINAL CLASS A.

2. CHESNAVFACENGCOM POINT OF CONTACT IS MR. J. MCLAUGHLIN AT AUTOVON 288-3881 OR (202) 433-3881.

DSTP

J. MCLAUGHLIN FPO-1C7
15 JULY 83 33881
James E McLaughlin

E. B. BRONZER, HD, OCEAN ENGR & CONSTR PROJ OFFICE (A)

COPY TO: 09/00; 0161; DAILY
FPO-1EA(PDC); FPO-1EA
FPO-1EA5; FPO-1C7
FPO-1C; FPO-10P2

UNCLASSIFIED

DD 1732 OCR

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ROUTINE

R 220001Z APR 83

FM PWC GUAM

TO CHESNAVFACENGCOM WASHINGTON DC

INFO COMNAVFACENGCOM ALEXANDRIA VA
COM THREE ONE NCR PORT HUENEME CA
COM THREE ZERO NCR GUAM
COMCBPAC PEARL HARBOR HI
PACNAVFACENGCOM PEARL HARBOR HI
UCT TWO

BT
UNCLAS //N11000//

SUBJ: FLEET MOORING INSPECTIONS

A. CHESNAVFACENGCOM WASHINGTON DC 123054Z APR 83

1. THE FOLLOWING INFO IS PROVIDED FOR PARAGRAPHS 1, 2.A, 2.F AND 2.G OF REF A:

MOORG NO.	MOORG CLASS	WTR DEPTH (FT)	DATE INSTD	DATE OVHLD	RPTD COND	PLND OVHL	TYPE SHIPS
951	AA	130	12/59	6/82	FAIR	6/88	AS-19
701	B	125	4/59	1/81	GOOD	1/86	AFS-7
702	A	150	6/57	2/82	GOOD	2/85	AFDL-21
703	B	140	6/57	2/82	GOOD	2/87	-
704	E	125	I0/69	1973	POOR	4/84	-
501	B	160	7/57	3/82	GOOD	3/87	-
25W	B	36	4/53	2/81	GOOD	2/86	22 CAPE CLASS
25E	B	36	4/53	2/81	GOOD	2/86	YTB
26E	B	32	9/53	3/82	GOOD	3/87	YTB
26W	B	32	9/53	3/82	GOOD	3/87	SWOB
27E	B	37	9/53	4/82	GOOD	4/87	-
27W	B	32	9/53	4/82	GOOD	4/87	30 BALSAM CLASS
28E	B	36	9/53	9/82	GOOD	9/87	YFN, YC
28W	B	36	9/53	9/82	GOOD	9/87	YPD
22	B	70	9/53	8/82	GOOD	8/87	YON
22/23	B	58	9/53	8/82	GOOD	8/87	-
12/13	D	105	-	7/82	GOOD	7/87	-
I3	D	97	-	7/82	GOOD	7/87	-

DLVR:CHESNAVFACENGCOM WASHINGTON DC(9)...ACT

RTD:000-000/COPIES:0009

649098/112 1 OF 2 M1 0270 112/10:04Z 220001Z APR 83
CSN:RXOY00271 PWC GUAM

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I4	D	97	10/53	6/82	GOOD	6/87	YC
15/I6	D	97	I0/53	9/82	GOOD	9/87	YTB
17	D	69	9/53	5/82	GOOD	5/87	YON

NOTE: BUOYS ARE NOT INSPECTED AFTER OVERHAUL.

2. FOR PARA 2.E: THERE IS NO ANTICIPATED MOORING USAGE DURING THE INSPECTION PERIOD IN JUNE 1983, UNLESS TYPHOON PREPARATIONS ARE NEEDED.

3. FOR PARA 2.H: CATHODIC PROTECTION IS PROVIDED ONLY FOR MOORING 27W AND CONSISTS OF ZINC LINK ANODES.

4. INFO REQUIRED BY PARAGRAPHS 2.B, 2.C AND 2.D TO BE MAILED 25 APRIL I983.
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ROUTINE

R 132054Z APR 83

FM CHESNAVFACENGCOM WASHINGTON DC

TO PWC GUAM

INFO COMNAVFACENGCOM ALEXANDRIA VA
COMCORPAC PEARL HARBOR HI
COM THREE ONE NCR PORT HUENEME CA
PACNAVFACENGCOM PEARL HARBOR HI
COM THREE ZERO NCR GUAM
UCT TWO

BT
UNCLAS //N11000//

SUBJ: FLEET MOORING INSPECTIONS

1. AS PART OF THE COMNAVFACENGCOM FLEET MOORING MAINTENANCE (FMM) PROGRAM, CHESNAVFACENGCOM, WITH DIVER SUPPORT FROM UCT TWO, PLANS TO CONDUCT AN UNDERWATER INSPECTION OF THE 20 MOORINGS OPERATED AND MAINTAINED BY PWC GUAM DURING JUNE 1983. AVAILABLE INFORMATION INDICATES 3 CLASS A MOORINGS IN 125-150 FEET OF WATER, 10 CLASS B MOORINGS IN 32-160 FEET OF WATER AND 7 CLASS D MOORINGS IN 32-105 FEET OF WATER. INSPECTION WILL RESULT IN SPECIFIC CONDITION ANALYSES AND RECOMMENDATIONS BY MOORING AND WILL ENHANCE THE PROGRAMMING OF FUNDS FOR FLEET MOORING MATERIAL SUPPORT.

2. THE FLEET MOORING INSPECTION TEAM WILL CONSIST OF A CHESDIV ENGINEER-IN-CHARGE (EIC) AND A DET FROM UCT TWO. IN ORDER TO PREPARE A DETAILED INSPECTION PLAN, THE FOLLOWING INFORMATION IS REQUIRED PER MOORING:
A. MAINTENANCE HISTORY - WHEN INSTALLED, WHEN INSPECTED, WHEN OVERHAULED, LAST REPORTED CONDITION, ETC.
B. COPIES OF AVAILIABLE MOORING DESIGN CALCULATIONS AND DRAWINGS.
C. COPIES OF "AS-BUILT" MATERIALS LIST.
D. FACILITY MAP SHOWING LOCATION OF ALL MOORINGS WITH SPECIFIC LOCATIONS FOR THOSE CURRENTLY IN USE.
E. ANTICIPATED MOORING USAGE DURING THE INSPECTION PERIOD - TYPES OF SHIPS.
F. PLANNED REPAIRS AND OVERHAULS - PARTICULARLY THOSE BEFORE THIS INSPECTION.
G. TYPES OR CLASSES OF SHIPS USING MOORING.
H. WHETHER CATHODIC PROTECTION SYSTEMS ARE INSTALLED AND TYPE

DLVR:CHESNAVFACENGCOM WASHINGTON DC(9)...ORIG

RTD:007-000/COPIES:0009

593518/103 1 OF 2 M1 0468 103/23:42Z 132054Z APR 83
CSN:RXOY00509 CHESNAVFACENGCOM WASHINGTON DC

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OF MATERIALS UTILIZED.

3. REQUEST PWC, GUAM MAIL THE ABOVE INFO AS SOON AS POSSIBLE TO CHESNAVFACENGCOM (CODE FPO-1C7), BLDG. 212, WASHINGTON NAVY YARD, WASHINGTON, D. C. 20374.

4. ADDITIONALLY, REQUEST PWC, GUAM REPLY BY MESSAGE WITH THE ABOVE INFORMATION EXCEPT FOR DRAWINGS AND MAPS BY 21 APRIL 1983. REGRET LATENESS OF THIS REQUEST. PWC EFFORT TO PREPARD THIS INFO WILL BE GREATLY APPRECIATED AND WILL SIGNIFICANTLY ENHANCE THE ACCURATE DOCUMENTATION OF CURRENT MOORING CONDITIONS AS WELL AS THE PROCUREMENT OF NEW FLEET MOORING MATERIALS.

5. CHESNAVFACENGCOM POINT OF CONTACT IS MR. JAMES MCLAUGHLIN AT AUTOVON 288-3881 OR (202) 433-3881.
BT

593518/103 2 OF 2 M1 0468 103/23:42Z 132054Z APR 83
CSN:RXOY00509 CHESNAVFACENGCOM WASHINGTON DC

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ROUTINE

R 2103317 AUG 82

FM CINCPACFLT PEARL HARBOR HI

TO CINCPAC PEARL HARBOR HI

INFO CHNAVMAT WASHINGTON DC
COMNAVAIRSYSCOM WASHINGTON DC
COMNAVFACENGCOM ALEXANDRIA VA
COMNAVTELCOM WASHINGTON DC
COMNAVSURFPAC SAN DIEGO CA
COMNAVAIRPAC SAN DIEGO CA
CG FMFPAC
COMOCEANSYSPAC PEARL HARBOR HI
COMNAVMARIANAS GUAM
COMPACMISTESTCEN PT MUGU CA
WESTNAVFACENGCOM SAN BRUNO CA
OICC MIDPAC PEARL HARBOR HI
OICC GUAM
OICC DIEGO GARCIA HOUSTON TX
PWC GUAM
PWC YOKOSUKA JA
PWC SAN FRANCISCO CA
COM THREE ZERO NCR GUAM
NAVPAL CENTERVILLE BEACH CA
NAVSTA SEAL BEACH CA
NAVSHIPREPFAC SUBIC BAY RP
NAF ATSUGI JA
PUGSHIPYD PUGET SOUND WA
NSC SAN DIEGO CA
THIRDFAC BANGOR WA
NSC GUAM
NAVSUPPFAC DIEGO GARCIA
NAVSTA LONG BEACH CA
NSC PEARL HARBOR HI
NAVSHIPYD MARE ISLAND CA
PACMISRANFAC HALAKEA BARKING SANDS HI
COMNAVSEASYSCOM WASHINGTON DC
COMNAVELEXSYSCOM WASHINGTON DC
CNR ARLINGTON VA
COMNAVLOGPAC PEARL HARBOR HI
COMSUBPAC PEARL HARBOR HI
COMTHIRDFLT
COMMARCORBASESPAC CAMP H M SMITH HI
COMNAVFORJAPAN YOKOSUKA JA
COMUSNAVPHIL SUBIC BAY RP
PACNAVFACENGCOM PEARL HARBOR HI
CHESNAVFACENGCOM WASHINGTON DC
OICC SUWESTPAC MANILA RP
OICC FAR EAST YOKOSUKA JA
PWC PEARL HARBOR HI
PWC SUBIC BAY RP
PWC SAN DIEGO CA
COM THREE ONE NCR PORT HUENEME CA
UCT TWO
NAVOCEANSYSCEN SAN DIEGO CA
NSD SUBIC BAY RP
MCAS IWAKUNI JA
NAVUSEAWARENGSTA KEYPORT WA
NAVMAG LUALUALEI HI
SUBASE BANGOR WA
NAVPHIBASE CORONADO SAN DIEGO CA
NAVSHIPREPFAC GUAM
NAVSTA SAN DIEGO CA
NAVSHIPYD PEARL HARBOR HI
SUBASE PEARL HARBOR HI

BT
UNCLAS //N11000//

SUBJ: UCT TWO FY83 EMPLOYMENT TASKING

DLVR:CHESNAVFACENGCOM WASHINGTON DC(9)...INFO

RTD:000-000/COPIES:0009

114776/235 1 OF 3 MI 0308 235/23:21Z 2103317 AUG 82
CSN:RADY00304 CINCPACFLT PEARL HARBOR HI

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A. CINCPACFLT PEARL HARBOR HI 260654Z JUN 82

1. REF A REQUESTED NOMINATIONS OF PROJECTS FOR UCT TWO ACCOMPLISHMENT FY83-85. FROM THE RESPONSES TO REF A THE FOLLOWING PROJECTS ARE TASKED FOR ACCOMPLISHMENT IN FY83:
   A. CENTERVILLE BEACH (CLASSIFIED)
   B. ARCTIC WEST (CLASSIFIED)
   C. BARKING SANDS, HI, CABLE LANDING AND REPAIRS
   D. WPNSTA SEAL BEACH, DEMOLISH ANAHEIM BAY BRIDGE
   E. NSD SUBIC, PILE REPAIR POL PIER
   F. NSD SUBIC, PILE REPAIR MARINE TERMINAL PIER PHASE I (REPAIR ALL SEVERE AND MAJOR DAMAGE)
   G. NAVSHIPREPFAC SUBIC, INSPECT ALAVA WHARF
   H. FLEET MOORING INSPECTION - PACIFIC DATA BASE (PEARL HARBOR HI, GUAM, YOKOSUKA, IWAKUNI, SASEBO, INDIAN ISLAND WA, BREMERTON WA)
   I. NAVMAG LUALUALEI, INSPECT AMMO PIERS W1-5
   J. UNDERWATER INSPECTION PROGRAM (NSC SAN DIEGO)
   K. SUBASE, BANGOR WA, UNDERWATER INSPECTION
   L. TRIREFFAC BANGOR WA, UNDERWATER MSF RANGE REPAIR
   M. DEGAUSSING RANGE SURVEY, SAN FRANCISCO CA
   N. NAVPHIBASE CORONADO SAN DIEGO CA, PIER INSPECTIONS

2. THE FOLLOWING PROJECTS ARE TASKED AS FILL IN WORK FOR FY83:
   A. UNDERWATER INSPECTION PROGRAM (NAVSTA PEARL HARBOR)
   B. NAVUSEAWAKENGSTA KEYPORT WA, INDIAN IS PHASE TWO MOORING
   C. NSD GUAM, REPAIRS TO SIERRA WHARF GUAM. REQUIRES COORDINATION WITH ON SITE NMCB FOR ACCOMPLISHMENT.

   THE FOLLOWING PROJECTS ARE TENTATIVELY TASKED FOR ACCOMPLISHMENT AS INDICATED:
   A. FY-84
      (1) ARCTIC WEST (CLASSIFIED)
      (2) NAVSHIPREPFAC GUAM, REPAIRS TO LIMA WHARF
      (3) FLEET MOORING INSPECTION - PACIFIC DATA BASE 9SUBIC BAY, NSF DIEGO GARCIA, PWC SAN DIEGO, NAVSTA SAN DIEGO, WPNGTA SEAL BEACH, NAVSTA LONG BEACH)
      (4) NSD SUBIC, WATERFRONT FACILITIES INSPECTION
      (5) NSD SUBIC, MONOBUOY FUEL LINE REPAIRS
      (6) DEGAUSSING RANGE SAN FRANCISCO, RANGE INSTALLATION
      (7) UNDERWATER INSPECTION PROGRAM CNAVSHIPY PEARL HARBOR, NSC PEARL HARBOR, SUBASE PEARL HARBOR)
      (8) SCARF REPAIR/INSPECTION
      (9) BARKING SANDS, UNDERWATER RANGE REPAIRS
      (10) NSD SUBIC, PILE REPAIR MARINE TERMINAL PIER PHASE 2

(REPAIRS TO MODERATE AND MINOR DAMAGE)

B. FY-85

(1) ARCTIC WEST (CLASSIFIED)

(2) BARKING SANDS - UNDERWATER RANGE WORK

(3) FLEET MOORING INSPECTION - PACIFIC DATA BASE (PEARL HARBOR HI, GUAM, JAPAN, PUGET SOUND WA)

(4) UNDERWATER INSPECTION PROGRAM (MARE ISLAND CA)

(5) SUBASE PEARL, MCON P-088, REPAIR AND EXTEND SEAWALL THIS PROJECT WILL REQUIRE SEPARATE TASKING OF AN RNMCB, CBU, OR OTHER ORGANIZATION AS "PRIME CONTRACTOR" FOR PILE DRIVING AND TOPSIDE ZONE, WITH UCT ACCOMPLISHING IN WATER SUPPORT.

AD-A147 672 [illegible] UNCLASSIFIED PEARL HARBOR HI

END

FILMED

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